

Work Order ID 56228

February 16, 2010 3:07:20 PM



Page 1

Item ID: D4010-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Bearpaw Assembly

Start Date: 2/16/10 Start Qty: 1.00

Required Date: 2/16/10 Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D4010-041

C

100

0.00



HandThermo

Memo

0.00

Hand Finishing Thermoforming

Pick Kit

BB
10/02/16

110

0.00



HandThermo

Memo

0.00

Hand Finishing Thermoforming

1- Use wearbar to transfer drill hole and open to finish size as per dwg
2- Deburr
3- Assemble as per Dwg D4010

BB
10/02/16
X1

120

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

BB
10/02/16
(X1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 56228

February 16, 2010 3:07:20 PM

Page 2

Item ID: D4010-041

Revision ID:

Item Name: Bearpaw Assembly

Start Date: 2/16/10 Start Qty: 1.00

Required Date: 2/16/10 Req'd Qty: 1.00

Reference:

Approvals:

Process Plan:

Date:

QC:

Date:

Tooling:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8/10/02/16

140



Packaging

Packaging

Identify as per dwg & Stock Location: _____

0.00

Memo

0.00

10-2-16 SP

150



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

10/02/16

MF 10-2-16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

February 16, 2010 3:07:18 PM

Page 1

4

Work Order ID: 56228



Parent Item: D4010-041

Parent Item Name: Bearpaw Assembly

Start Date: 2/16/10

Required Date: 2/16/10

Comments: IPP RevB: 09/11/03 Drawing changed to accomidate OEM and Dart Skidtube.
DL. Verified by:DD IPP Rev. C Dwg.
Redesign 09/11012 DL VERIFIED BY:DD

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Remaining	Qty	Date	Status
AN3C5A		Purchased	No			100	Each	564.0000	5.0000			
Bolt												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST	564	
111424	8	
111707	69	
112314	1	
113121	206	5
113149	274	
113644	6	

BB
10/02/16

D3456-1

Manufactured No

100 Each 188.0000 3.0000



Washer

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST	188	
51653	7	3
54692	181	

BB
10/02/16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

February 16, 2010 3:07:18 PM

Page 2

Work Order ID: 56228



Parent Item: D4010-041



Parent Item Name: Bearpaw Assembly

Start Date: 2/16/10

Required Date: 2/16/10

Comments: IPP RevB: 09/11/03 Drawing changed to accomidate OEM and Dart Skidtube.
DL. Verified by:DD IPP Rev. C Dwg.
Redesign 09/11012 DL VERIFIED BY:DD

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Remaining	Qty	Date	Status
D4010-1		Manufactured	No			100	Each	3.0000	1.0000			



Bearpaw



Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
ST	3	
53879	3	

Main Warehouse

ST

3

53879

3

D4013-041

Manufactured No

100

Each

18.0000

1.0000



Wearplate Assembly



Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
ST	18	
53880	8	
54444	10	
Main Warehouse		
ST256	8	

Main Warehouse

ST

18

53880

8

54444

10

Main Warehouse

ST256

8

BB
10/02/16

BB
10/02/16
100216
X1

February 16, 2010 3:07:18 PM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

February 16, 2010 3:07:18 PM

Page 3

Work Order ID: 56228

Parent Item: D4010-041

Parent Item Name: Bearpaw Assembly

Start Date: 2/16/10

Required Date: 2/16/10

Comments: IPP RevB: 09/11/03 Drawing changed to accomidate OEM and Dart Skidtube.
DL. Verified by:DD IPP Rev. C Dwg.
Redesign 09/11012 DL VERIFIED BY:DD

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Remaining	Qty	Date	Status
D4015-041		Manufactured	No			100	Each	105.0000	5.0000			



Wearbar Weldment



Warehouse	Loc Qty	Loc Code
Location		

Main Warehouse

ST	104	
----	-----	--

53818	11	
-------	----	--

53956	93	
-------	----	--

Main Warehouse

therm	1	
-------	---	--

53818	1	
-------	---	--

MS21043-3

Purchased

No

100

Each

4,322.000

5.0000



Nut



BB
10/02/16

Warehouse	Loc Qty	Loc Code
Location		

OFFSHORE

FG	80	
----	----	--

103691	80	
--------	----	--

Main Warehouse

ST	4242	
----	------	--

111819	70	
--------	----	--

112243	29	
--------	----	--

112314	4143	
--------	------	--

3

BB
10/02/16

February 16, 2010 3:07:18 PM

Shop Packet Print

Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

February 16, 2010 3:07:19 PM

Page 4

Work Order ID: 56228



Parent Item: D4010-041



Parent Item Name: Bearpaw Assembly

Start Date: 2/16/10

Required Date: 2/16/10

Comments: IPP RevB: 09/11/03 Drawing changed to accomidate OEM and Dart Skidtube.
DL. Verified by:DD IPP Rev. C Dwg.
Redesign 09/11012 DL VERIFIED BY:DD

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Remaining	Qty	Date	Status
MS21043-4		Purchased	No			100	Each	544.0000	3.0000			



Nut

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
OFFSHORE		
FG	40	
104603	40	
Main Warehouse		
ST	504	
112243	2	
112314	103	
112492	11	
113064	388	

3

BB
10/02/16

February 16, 2010 3:07:19 PM

Shop Packet Print

Page 4

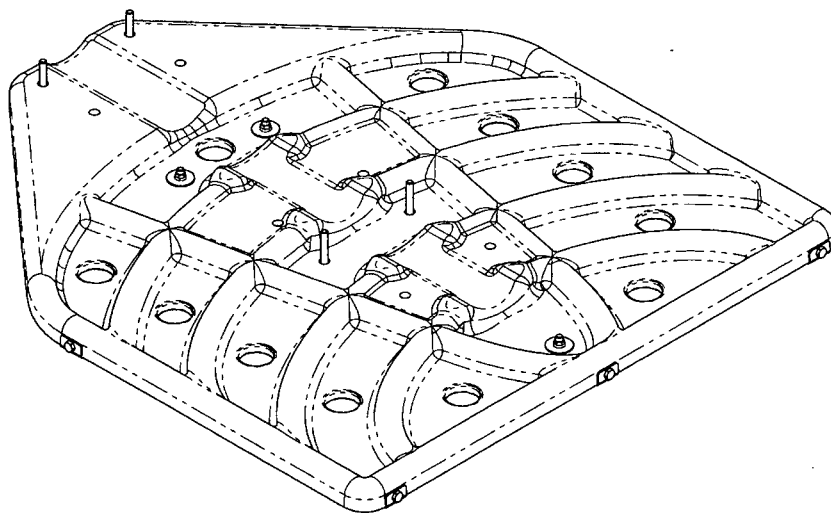
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4010-041 BEARPAW ASSEMBLY (407)

*WLS
56228*

RELEASED
2009-11-26
NT

REV.	DESCRIPTION	BY	DATE
C	OPTIMIZED DESIGN BASED ON FUNCTIONALITY AND TO EASE MANUFACTURING	MB	09.11.10
B	REDESIGNED, ADDED PROVISIONS FOR COMPATIBILITY WITH OEM SKIDTUBES/SADDLES; REDEFINED SOME TOLERANCE	MB	09.11.02
A	NEW ISSUE	MB	09.10.22
DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>[Signature]</i>		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>[Signature]</i>	D4010	SHEET 1 OF 3
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	BEARPAW (407)	NTS
DATE	09.11.10	<small>COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

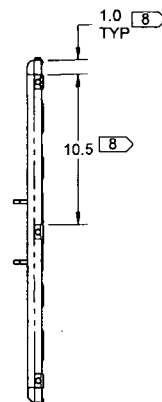
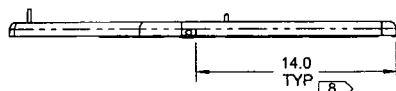
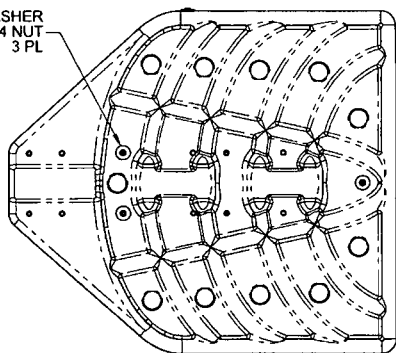
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

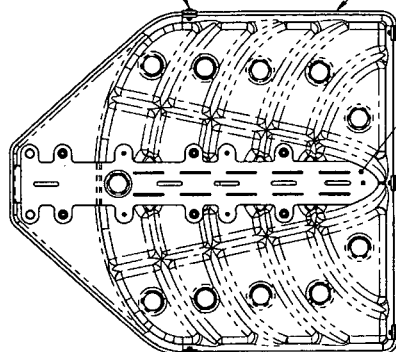
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

D3456-1 WASHER
MS21043-4 NUT
3 PL



AN3C5A BOLT
D4015-041 WEARBAR
MS21043-3 NUT



AN3C5A BOLT
D4015-041 WEARBAR
MS21043-3 NUT

D4010-1
BEARPAW

AN3C5A BOLT
D4015-041 WEARBAR
MS21043-3 NUT

D4013-041 WEARPLATE
ASSEMBLY

AN3C5A BOLT
D4015-041 WEARBAR
MS21043-3 NUT

AN3C5A BOLT
D4015-041 WEARBAR
MS21043-3 NUT

D4010-041 BEARPAW ASSEMBLY (407)

ITEM	QTY -041	P/N	DESCRIPTION
1	X	D4010-041	BEARPAW ASSEMBLY (407)
3	3	D3456-1	WASHER
4	1	D4010-1	BEARPAW
5	1	D4013-041	WEARPLATE ASSEMBLY
6	5	D4015-041	WEARBAR
21	5	AN3C5A	BOLT
22	5	MS21043-3	NUT
23	3	MS21043-4	NUT

w/o 56228

RELEASED
2009-11-24

D4010-041 NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 9.41 lbs
- 8) LOCATE D4015-041 (ITEM 5) AS SHOWN AND TRANSFER DRILL $\varnothing 0.191$ " HOLE FROM D4015-041 TO D4010-1 BEARPAW AND FASTEN USING PRESCRIBED HARDWARE.
- 9) TORQUE: AN3 NUTS = 15-20 in-lb
AN4 NUTS = 50-70 in-lb

DESIGN	1	DART AEROSPACE LTD	
DRAWN	1	HAWKESBURY, ONTARIO, CANADA	
CHECKED	1	DRAWING NO.	REV. C
MFG. APPR.	1	D4010	SHEET 2 OF 3
APPROVED	1	TITLE	SCALE
DE APPR.	1	BEARPAW (407)	NTS
DATE	09.11.10	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATION TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

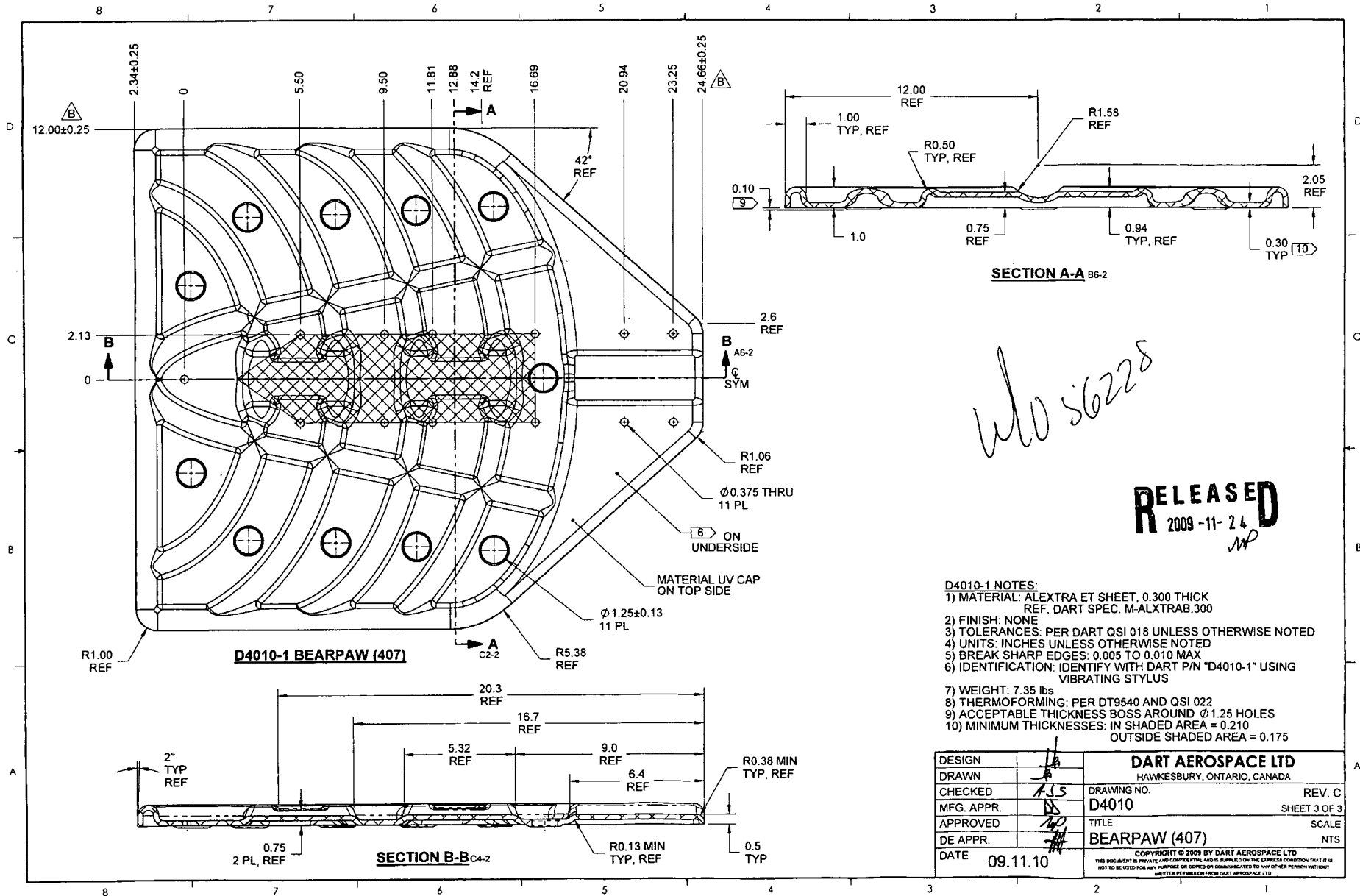
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries